

WIL 4-2a



United States
Department of
Agriculture

Forest
Service

RO

Reply To: 3400

Date: SEP 11 1986

Subject: Budworm Defoliation in Young Plantations

To: Forest Supervisors, Malheur and Wallowa-Whitman NFs

On July 15 through 17, Entomologist Roger Sandquist visited several sites in eastern Oregon to assess the significance of western spruce budworm defoliation on Douglas-fir plantations. Forest Pest Management entomologists have advised that it is unlikely that wind-dispersed larvae from adjacent host overstory would significantly damage plantation seedlings. However, recently there has been a level of concern that the current high population of budworm could seriously damage recently established plantations. This survey was conducted to determine whether a more extensive analysis of budworm population levels and damage in plantations was needed. In all, a total of 13 plantations were visited. Plantations on the Malheur NF were visited July 15. Bill McArthur, Bob Hilliard, Brian Lynch, and Ed Butler accompanied the visit to the Bear Valley RD plantations. McArthur and Lynch also accompanied the visit to the Long Creek RD sites.

Plantations on the Wallowa-Whitman NF were visited July 16 and 17. The following individuals accompanied the visit on their respective Districts: Ralph Walker, Unity RD; Glenn Hedgepeth, Baker RD; and Laurie Smit, Randy Knight, and Julie Larson, LaGrande RD. Roger spoke with Ken Rockwell of the LaGrande RD prior to visiting their sites.

With the exception of the Hancock 41 plantation on the Bear Valley RD, there was only minor defoliation on some of the seedlings under live overstory host. On these seedlings, losses may range from growth loss to some buds being killed and a lateral shoot taking dominance. Overall, the losses are probably negligible. In a number of the plantations that we have visited previously, a more serious problem for seedling establishment has been browsing and trampling by big game and cattle.

The Hancock 41 plantation on the Bear Valley RD, Malheur NF, is an exception to our previous observations in newly established plantations. In May, 1-0 Douglas-fir seedlings were planted in a clearcut. Over the area of the plantation we traversed, approximately 9 out of 10 seedlings had new buds defoliated by western spruce budworm. No mortality was observed that could be attributed to budworm. The reason for the high incidence of larvae in this plantation can only be surmised. The general area surrounding the plantation has been defoliated heavily for the last 3 years. It may be that large numbers of the larvae found host foliage unsuitable and dispersed. Dispersing larvae and favorable wind conditions may have deposited uncommonly high numbers of larvae on the plantation. We cannot predict whether plantations as Hancock 41 will continue to sustain similar damage in the future. To help us to keep a





Forest Supervisors, Malheur, Wallowa-Whitman NFs

2

record of this situation, we would appreciate receiving copies of the fall survey for establishment of the plantation so we can determine how much mortality may have occurred because of the budworm. At this time, we do not recommend more extensive analyses of budworm population levels in new plantations.

Please keep us informed of any unusual situations concerning the current western spruce budworm outbreak. We are especially interested in areas that are particularly vulnerable to damage or that are high value such as seed orchards or evaluation plantations.

JAMES S. HADFIELD
Acting Director of Forest Pest Management

cc:
East Side NFs
Mt. Hood NF
OSDF
WDNR
Wickman, PNW, LaGrande

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